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PN - JP9267408 A 19971014  
 PD - 1997-10-14  
 PR - JP19960104565 19960402  
 OPD - 1996-04-02  
 TI - PRODUCTION OF FRP TUBE  
 IN - NISHIHARA MASAHIRO  
 PA - TORAY INDUSTRIES  
 IC - B29D23/00 ; A63B49/10 ; B29C70/16 ; F16L9/12 ; B29C43/10 ;  
 B29L23/00 ; B29L31/52

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TI - Producing fibre reinforced polymer pipe - involves preparing a tubular preform by covering a flexible tube with a reinforcing fibre  
 PR - JP19960104565 19960402  
 PN - JP9267408 A 19971014 DW199751 B29D23/00 007pp  
 PA - (TORA ) TORAY IND INC  
 IC - A63B49/10 ; B29C43/10 ; B29C70/16 ; B29D23/00 ; B29L23/00 ; B29L31/52 ; F16L9/12  
 AB - J09267408 FRP pipe production involves preparing a tubular preform by covering a flexible tube with a reinforcing fibre. It is placed in the cavity of a mould and pressurised to press the tube to wall surface of the cavity. The relation between outer circumferential length (Cp) of the preform and inner circumferential length (Cc) of the cavity before pressurisation is such that  $C_p > 0.6 C_c$ . The reinforcing fibre is arranged at an angle of less than plus or minus 45 deg. to pipe axis direction, and  $C_p > 0.8 C_c$ . The reinforcing fibre is impregnated with a resin before the preform is placed in the cavity of mould. A preform (not) impregnated with a resin is placed in the cavity of mould and then a resin is poured into the cavity of mould. The preform is formed by using braid of the reinforcing fibre. The cross-sectional shape of the preform shows change in pipe axis direction. The FRP pipe is a racket frame. Preferred matrix resin is an epoxy resin.  
 - ADVANTAGE - High quality FRP pipe useful as racket frame is obtained.  
 - (Dwg.0/8)  
 OPD - 1996-04-02  
 AN - 1997-554010 [51]

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- PN - JP9267408 A 19971014
- PD - 1997-10-14
- AP - JP19960104565 19960402
- IN - NISHIHARA MASAHIRO
- PA - TORAY IND INC
- TI - PRODUCTION OF FRP TUBE
- AB - PROBLEM TO BE SOLVED: To obtain an FRP tube of excellent quality by rationalizing the relation between the size of a preform and that of a cavity in an internal pressure molding method.
- SOLUTION: A tubular preform 4 obtained by covering a flexible tube 1 at least with reinforcing fibers is introduced into the cavity 6 of a mold and pressed to the wall surface of the cavity 6 by pressurizing the interior of the flexible tube 1 to mold an FRP tube. In this case, the relation between the outer periphery length ( $C_p$ ) of the preform before pressurization and the inner periphery length ( $C_c$ ) of the cavity is set to  $C_p > 0.6C_c$ .
- SI - B29C43/10 ; B29L23/00 ; B29L31/52
- I - B29D23/00 ; A63B49/10 ; B29C70/16 ; F16L9/12

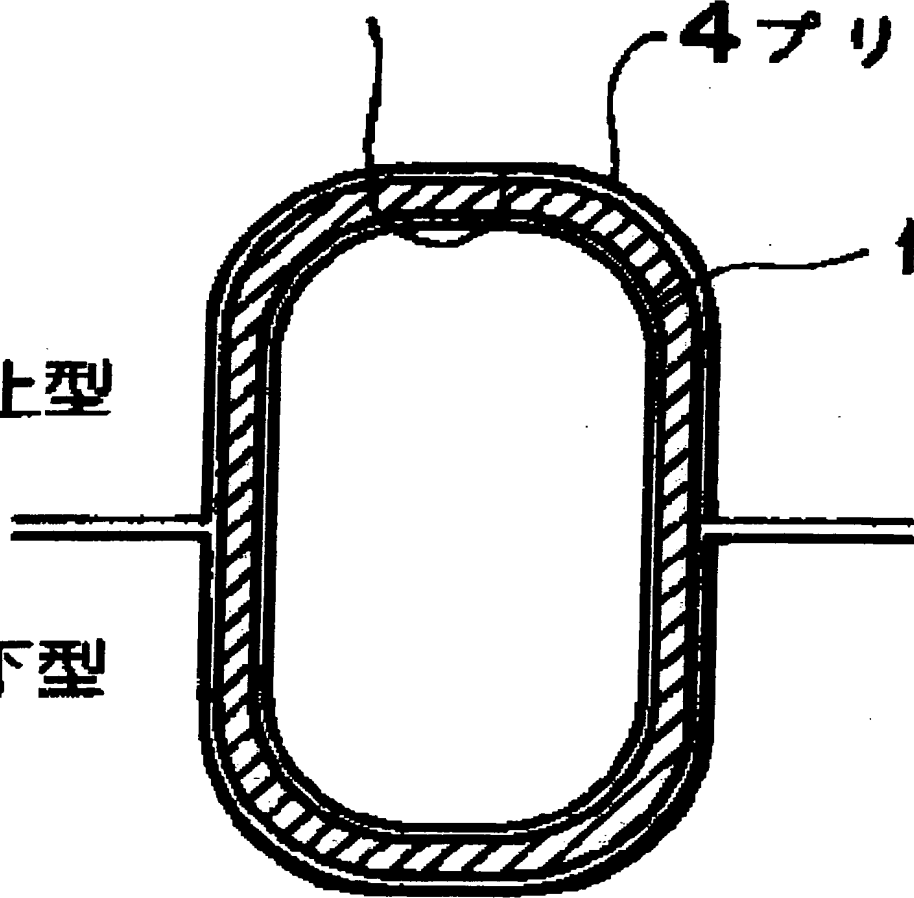
6キャビティ

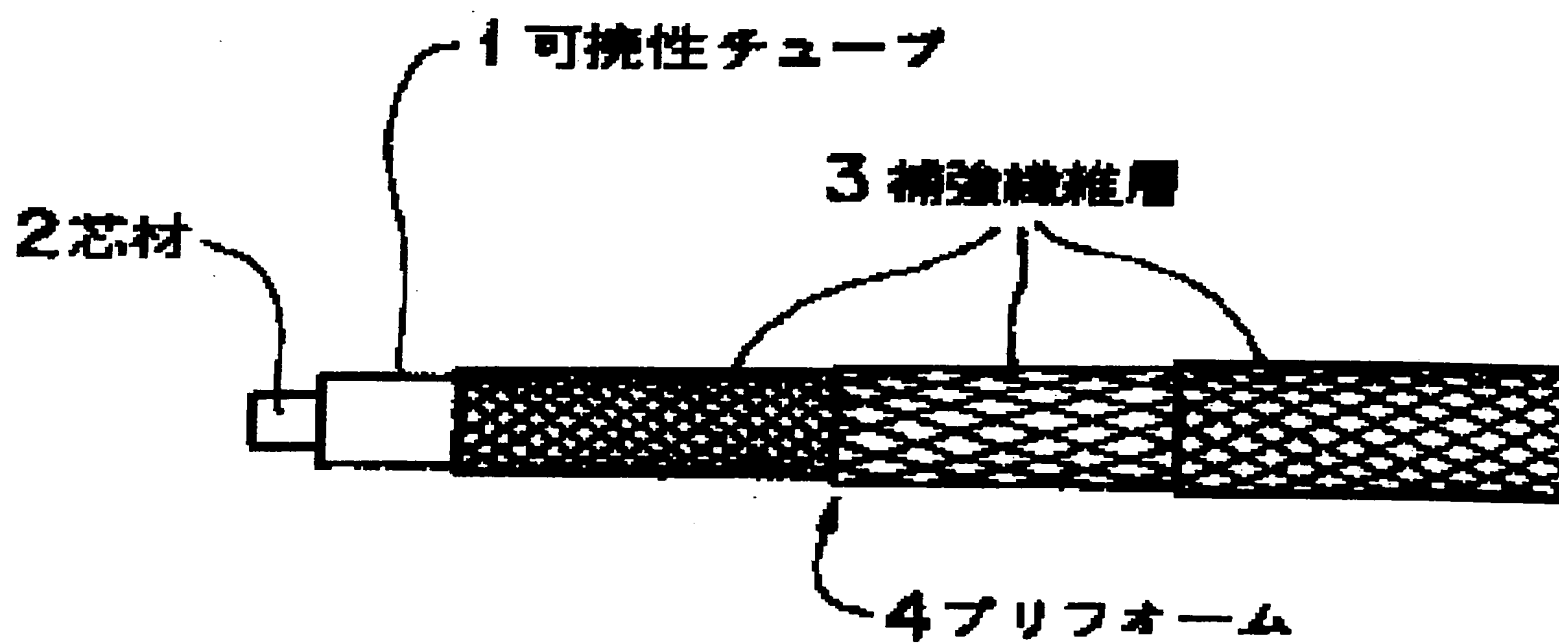
4プリフォーム

1可撓性チュー

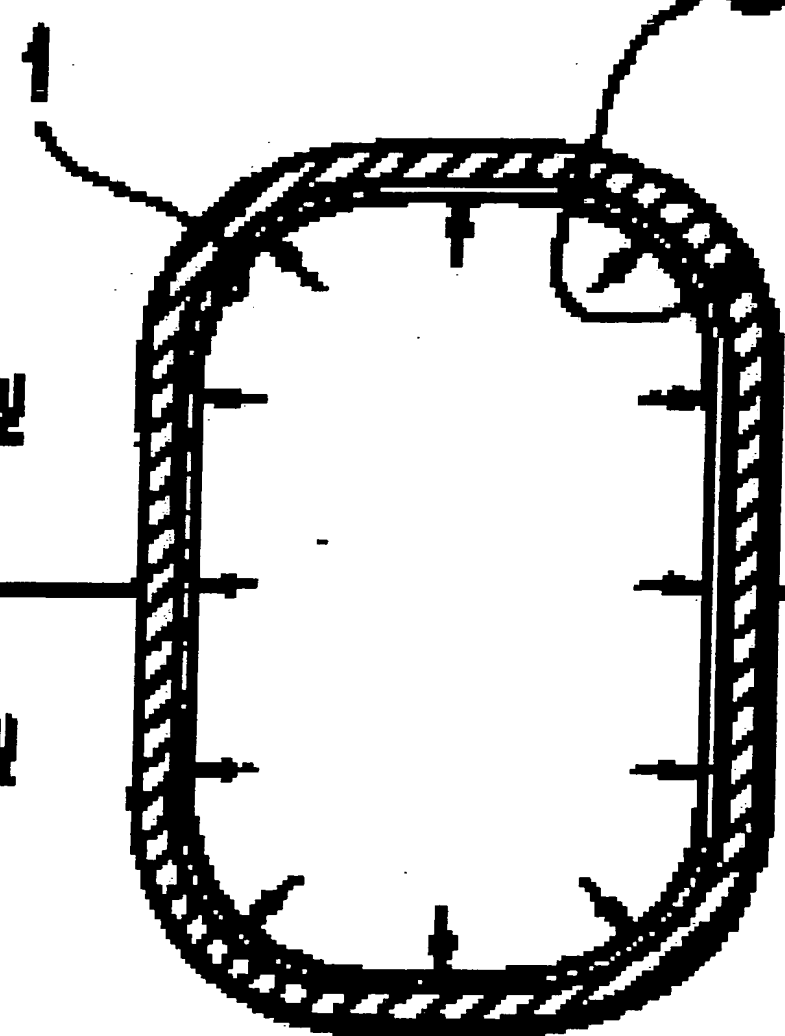
5a上型

5b下型





6キャピテ.



5a 上型

5b 下型